ECB PERFORMANCE ERGOMETER E 450

OWNER'S MANUAL
BETRIEBSANLEITUNG
MODE D'EMPLOI
MANUALE D'USO
BRUKSANVISNING
KÄYTTÖOHJE

The Tunturi ECB Performance Ergometer E 450 is one of the first ergometers on the fitness equipment market with permanent magnetic brake and electronic resistance measurement.

Das Tunturi ECB Performance Ergometer E 450 ist unter den ersten Ergometern mit einer Dauermagnetbremse auf dem Trainingsgerätemarkt, bei dem der Tretwiderstand elektrisch gemessen wird.

Le cycloergomètre Tunturi ECB Performance Ergometer E 450 compte parmi les premiers cycloergomètres qui soient équipés d'aimants permanents et d'un compteur électronique.

La Tunturi ECB Performance Ergometer E 450 è il primo cicloergometro a magnete permanente al mondo a misurazione elettronica.

Tunturi ECB Performance Ergometer E 450 är en av de första ergometrarna på marknaden med permanentmagnetbroms, där motståndet mäts elektroniskt.

Tunturi ECB Performance Ergometer E 450 on kuntovälinemarkkinoiden ensimmäisiä kestomagneettijarrulla varustettuja ergometrejä, jossa vastustaso mitataan elektronisesti.

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SAFETY INSTRUCTIONS

Note the following safety precautions:
* Place the ergometer on as even a base as possible.
* Hold the handlebar for support when getting on or off the ergometer. Do not step on the frame housing.
* Wear proper clothing and shoes when exercising.
* Only one person may use the ergometer at a time.
* Always keep your hands well away from moving parts.
* Before you start training, consult a physician to check your state of health.
* If you experience nausea, dizziness, or other abnormal symptoms while exercising, stop your workout immediately and consult a physician.
* The ergometer is not intended for use by children. Keep children well away from the ergometer while exercising.
* To avoid muscular pain, begin and end each workout by stretching, warming up and cooling down.
* The magnet caliper of the magnetic brake forms an extremely powerful magnetic field which may damage, for example, the mechanism of a watch or the identifying magnetic tape of a credit or cash card if they come into immediate contact with the magnets.
* Never attempt to detach or remove the magnet caliper of the magnetic brake.

HINWEISE UND VORSICHTSMASSNAHMEN

Bitte folgendes beachten:
* Das Gerät auf möglichst ebenem Boden aufstellen.
* Beim Auf- und Absteigen an den Handstützen festhalten. Nie auf die Abdeckungen treten.
* Fürs Training geeignete Kleidung und Schuhe tragen.
* Jeweils nur eine Person darf das Gerät benutzen.
* Nie die Hände in die Nähe beweglicher Teile bringen.
* Vor Aufnahme eines Trainingsprogramms den Gesundsheitszustand vom Arzt untersuchen lassen.
* Bei Übelkeit, Schwindelgefühl oder anderen Symptomen das Training sofort abbrechen und den Arzt aufsuchen.
* Das Ergometer eignet sich nicht für Kinder. Sie sind deshalb beim Einsatz des Geräts fernzuhalten.
* Zur Vermeidung von Muskelkater stets mit langsamem Joggen oder Gehen und Dehnübungen auf- und abwärmen.
* Der Magnetbügel der Bremsvorrichtung erzeugt ein äußerst starkes Magnetfeld, das z.B. die Armbanduhr oder die Daten auf Bank- oder Kreditkarten beschädigen kann, wenn diese in direkten Kontakt mit den Magneten kommen.
* Nie selbst versuchen, den Magnetbügel der Bremse zu lösen oder auszubauen.

REMARQUES ET MISES EN GARDE

Faire attention aux points suivants:
*Placez l'appareil sur une surface aussi plane que possible.
*Prenez appui sur le guidon en montant sur l'appareil ou en en descendant. Ne montez pas sur la partie centrale.
*Ne montez jamais à deux ou à plusieurs sur l'appareil.
*N'approchez jamais vos mains des parties mobiles de l'appareil.
*Consultez votre médecin avant de commencer les exercices.
*Si vous êtes pris de nausées ou de vertiges ou sentez d'autres symptômes anormaux pendant l'entraînement, interrompez immédiatement la session et consultez votre médecin.
*L'appareil n'a pas été prévu pour les enfants. Ne laissez pas les enfants s'approcher de l'appareil quand vous vous entraînez.
*Afin d'éviter toutes douleurs musculaires, commencez et terminez vos sessions par des mouvements d'échauffement et d'étirement.
*Le champ magnétique très intensif généré par les aimants de l'arc de frein peut endommager les montres ainsi que les cartes bancaires et cartes de crédit, si elles entrent en contact direct avec les aimants.
*N'essayez jamais de démonter ou d'enlever l'arc du frein magnétique.

ASSEMBLY

Once the ergometer and all its parts have been unpacked from the package, the ergometer is assembled as follows (left, right, front and back are as seen from the exercising position):

Fasten the right pedal to the right pedal crank turning clockwise and the left pedal to the left pedal crank turning anticlockwise. The pedals are distinguished from each other by the markings R and L on their shafts (R = right, L = left). The pedal straps are adjustable. Adjust to the required tightness and push the end of the strap into place.

Fasten the seat to the seat tube with the three nuts.

Figure 1
Fit the handlebar support tube into place so that the attachment holes of the resistance adjustment knob are at the back. Lean the ergometer on one side so that the seat and seat tube rest, for example, against a chair.

Figure 2
Fit the bottom screw of the handlebar support tube into place and tighten it. Fit the seat tube stopper screw in the hole at the lower end of the seat tube at the same time. The stopper screw prevents the seat tube from moving too far down.

Connect the wire plug fastened to the frame tube with tape to the socket at the base of the handlebar support tube. Lift the ergometer back into the upright position.

Figure 3
Slip a flat object, such as a piece of wood, under the ergometer frame to lift the back of the device up from the floor. Place the support leg under the back of the frame and fasten it with with two screws. Remove the piece of wood from under the ergometer.

Figure 4
Connect the wire plug coming out through the top of the handlebar support tube to the socket on the base of the meter. Push the meter into place. BE CAREFUL not to get the wire caught!
Fasten the resistance adjustment knob to the handlebar support tube and turn it clockwise to its extreme position. Rotate the flywheel with your hand to make sure that it rotates freely and does not rub against any part of the ergometer. After using the ergometer, always turn the adjustment knob anticlockwise by three turns to release and loosen the adjustment wire and springs.

USE

1) Adjusting seat height

The seat height should be adjusted so that the middle part of the foot reaches the pedal with the leg almost straight and the pedal is in its lowest position. Loosen the adjustment knob and raise or lower the seat to the height you desire. Make sure that the end of the seat's locking pin fits into the hole in the seat tube. Tighten the adjustment knob.

2) Adjusting the handlebar

Loosen the grey hendlebar adjustment knob (on the front of the handlebar support tube) and adjust the distance of the handlebar so that you can pedal with your arms almost straight and that the pedalling position feels comfortable. Tighten the adjustment knob.

3) Adjusting pedalling resistance

You can increase the resistance by turningthe adjustment knob on the top of the handlebar support tube clockwise; to decrease resistance, turn anticlockwise.

A low resistance and fast tempo are best for improving aerobic fitness; a higher resistance on the other hand develops the working muscles better.

4) Pedalling

It is advisable to start pedalling at a low resistance. After a few minutes' warm-up you can gradually increase the resistance.

METER

The ECB Performance Ergometer E 450's multifunction meter enables you to measure time, distance, speed, effort, energy consumption and pulse. The meter switches on automatically at the first press of a key and switches off automatically when the ergometer has not been pedalled or a key on the meter pressed for about 4 minutes.

METER DISPLAYS

When the meter switches on it shows the normal exercise display. The left-hand side of the top row shows the user's pulse, which may range between 25 to 250 beats per minute. The heart indicator next to the pulse value flashes in rhythm with the user's heart beat. On the right-hand side energy consumption is displayed either in kilojoules or kilocalories (0-999) as a cumulative value which resets to zero either by pressing the RESET key or when power is switched off.

The left-hand side value in the middle row indicates the effort value in watts (0-999). The right-hand side value counts time at 00:00-59:59 second intervals and 1:00-99.59 minute intervals. The time-count starts from the beginning of the exercise session or from the last resetting to zero. NB! The time display does not run if speed is zero. This is useful if you have to interrupt a pre-planned workout of a certain length. To set a certain exercise time, press the set timer key (see keys and functions, section 7). The display will then indicate the set exercise time as a diminishing value. A sound signal indicates the end of the exercise time.

The left-hand side value on the bottom row indicates the speed either as kilometres per hour (km/h), miles per hour (mph) or the number of pedalling revolutions per minute (RPM). The value ranges from 0 to 199. The right-hand side value indicates the accumulated distance (from the beginning of the exercise session or from the last resetting to zero) either in kilometres or miles (0.0-99; at intervals of 0.1 from 0.0-9.9 and at intervals of 1 within 10-99).

Setting the low pulse limit

The display shows the low pulse limit, which may range from 25 to 250 beats per minute. If a value has not been set or if it has been reset to zero, the display shows two lines — instead of numbers. The value can be increased or decreased by pressing the arrow keys, or it can be reset to zero by pressing the RESET key. The heart indicator does not flash. The text LO indicates that the low pulse limit is in question.

Setting the high pulse limit

The display and functions are otherwise the same as in the above, but instead of the text LO, the display shows the text HI (high pulse limit).

Countdown timer setting

The desired exercise time is set by means of the arrow keys in minutes (00:01-99:59). If the time has not been set, the display shows four lines —:—. The colon between the numbers does not flash.

Setting the low effort limit

The display shows the low effort limit within the range 0-999 watts. If the effort value has not been set or if it has been reset to zero, the display shows two lines — instead of numbers. The value is increased or decreased by pressing the arrow keys, and reset to zero by pressing the RESET key. The text LO refers to the low limit of the effort value.

Setting the high effort limit

The display is otherwise the same as above, but instead of the text LO, the display shows the text HI (high effort limit).

Total values

When you press the TOTAL key, the display shows the total values. Total time of use is indicated in days (0-999; text DAYS) as well as hours and minutes (00:00-23:59). Total distance is expressed in kilometres or miles (0-19999).

METERS

distance	0.0-99 or 10-99
total distance	0-19999
time	00:00-59:59 min:s or 1:00-99:59 h:min
total time	0-999 in 24 h periods and 00:00-23:59 h:min
energy	0-999
effort	0-999
pulse	25-250
speed	0-199

SOUND SIGNALS

A sound signal can be heard whenever one of the keys is pressed. When the set exercise time has elapsed, five successive

sound signals can be heard. If the pulse or effort limits are exceeded, two sound signals at short intervals can be heard until the user's pulse has returned within the range of the limit values. If pulse or effort is 0, there is no sound signal even if a low limit has been set for the pulse/effort.

KEYS AND FUNCTIONS
There are 10 different keys.

1. Arrowheads up
   Increases set values
2. Arrowheads down
   Decreases set values
3. Set pulse limits
   In the normal exercise mode:
   1st press of key = sets low pulse limit with arrow keys
   2nd press of key = sets high pulse limit with arrow keys
   3rd press of key = returns to exercise mode
4. Set effort limits
   In the normal exercise mode:
   1st press of key = sets low effort limit with arrow keys
   2nd press of key = sets high effort limit with arrow keys
   3rd press of key = returns to exercise mode
5. km/h, mph, RPM (=revolutions per minute)
   Changes the unit of speed in the following order:
   km/h -> mph -> RPM -> km/h ...
6. kj, kCal
   Changes the unit of energy from kilojoules to kilocalories or vice versa.
7. Set timer
   In the normal exercise mode:
   1st press of key = sets the exercise time with arrowkeys
   2nd press of key = returns to the exercise display
8. km, miles
   Changes the unit of distance from kilometres to miles or vice versa.
9. Total
   Total time of use and odometer
   Press again to return to exercise display.
10. Reset key (resetting to zero)
    In the exercise mode, resets time, distance and energy to zero. In the mode for setting pulse and effort limits, resets the value on the display at any time to zero; in the timer setting mode resets the timer to zero.

MEASURING THE PULSE

The pulse is measured by means of an ear sensor. To measure the pulse, attach the ear sensor to the earlobe and push the sensor plug into place in the socket on the right-hand side of the meter housing. Measurement starts once the meter has been activated. This is done by pressing any key. The pulse meter remains active for as long as the ear sensor is clipped on. If the ear sensor is not clipped on, the meter remains in the active mode first for 1 minute after the meter has been switched on and then for 5 seconds if you have pressed any key. The ear sensor must be clipped on within this time. When the ear sensor is detached from the ear, the meter remains active for 20 seconds. If you wish to continue pulse measurement later, the meter must be reactivated by pressing a key.

NB! When the pulse measuring is not used, unplug the ear sensor wire to save batteries.

The pulse can also be measured by means of a wireless transmitter-receiver pair (available as an accessory), in which case the transmitter is attached to an electrode belt by press-studs and the belt is then fastened around the chest. The transmitter transmits the pulse automatically to the receiver which is in the display unit. Transmission from transmitter to receiver is by means of an electric field.
If you use telemetric pulse measurement, remember to remove the ear sensor plug from the meter housing socket. NB! Do not use the transmitter simultaneously with an electronic pacemaker as the transmitter may cause interference.

PRINTER CONNECTION

Training results (time, speed, effort, distance, energy consumption and pulse) can be printed out. The E 450 has a standard centronics parallel interface. The connection is a 25-pin D terminal (female).The printer used can be any matrix printer with a centronics interface, e.g. EPSON LX 810, Panasonic KX-P 1180, Citizen 200 GX etc.

Connect the printer cable to the interface on the bottom of the meter. When the printer power is switched on, the device produces a printout of the training results line by line automatically at 10 sec. intervals. NB! Always remember to unplug the printer cable after use.

MAINTENANCE

The ECB Performance Ergometer E 450 is exceptionally durable and designed for continuous heavy use. To ensure accurate operation and long service life, it is necessary to carry out certain simple adjustment and maintenance procedures from time to time, depending on the frequency of use.

Checking and adjusting the brake
The correct adjustment of the brake should be checked if the braking resistance seems to have changed.

Remove the fastening screw of the grey top housing and the 4 fastening screws of the white side covers. Remove one of the pedals. Lift the top housing upwards so that you can spread the side covers outwards from under the edge of the housing. Turn the pedal cranks so that the pedal crank without the pedal remains inside the side cover. Put your fingers between the flywheel and the side covers from the back of the seat tube and pull the covers outwards until the touch fastening tape on the covers detach. Pull the side covers, which are attached to each other, out from the rear. NB! Take your watch off before the following step, as it may be damaged by the magnetic field of the brake mechanism. If the brake caliper magnets are clearly further than 1 mm away from the flywheel rim, the brake cable has stretched:
Adjust the brake cable to its extreme + position (maximum) by turning the resistance adjustment knob. Push the approximately 1 mm thick plastic calibration strip between the magnets and the flywheel (see Fig. 5). Adjust the cable adjustment screw (see Fig. 6) so that in its maximum position the brake adjustment knob pulls the brake caliper only just into contact with the calibration strip. Remove the calibration strip and replace the plastic covers.

Adjusting the chain
The ECB Performance Ergometer E 450 is designed to minimize the need to adjust the chain, since the flywheel cannot move in relation to the chain. Therefore, the chain only needs to be adjusted when the it has loosened as a result of wear due to use.

The adjustment of the chain is carried out from the free-wheel hub as follows:
Undo the fastening screw of the grey top housing and lift the housing upwards (see fig. 7). Place a support under the front edge of the housing to hold it up. Loosen the screw above the hub in the frame. Slip an Allen wrench, screwdriver or other pin of suitable size into the groove of the cam part and rotate the cam clockwise until the chain is at the correct tightness, that is, when it can be moved freely about 5 mm up or down at its centre point. Tighten the screw above the hub and replace the housing.

MOVING AND STORAGE (s. fig. 8)

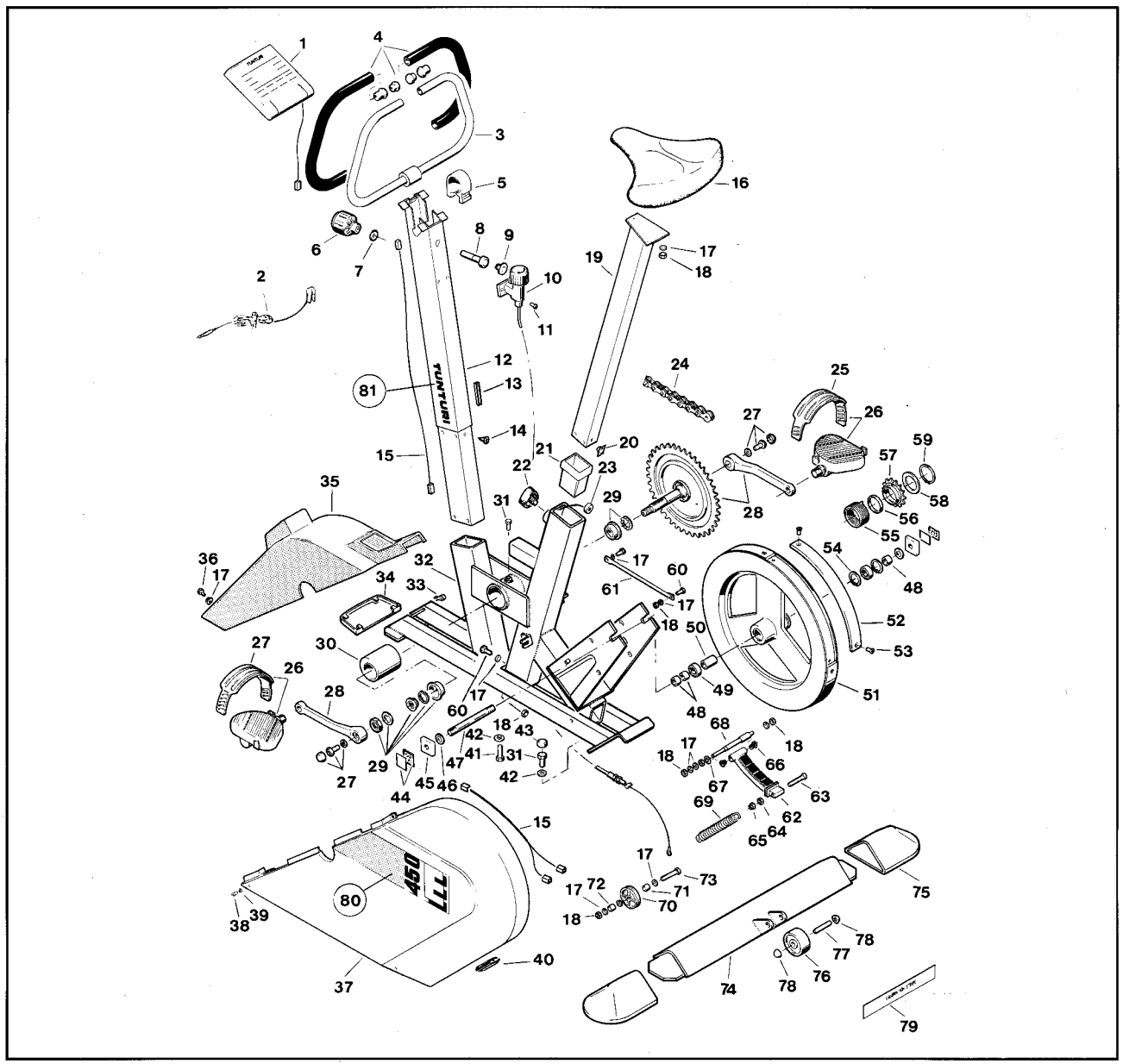
The ergometer is easy to move by pushing along the floor on the transport wheels at the back. To avoid malfunctions, store and use the ergometer in a dry place with as even a temperature as possible and protected from dust.

CHANGING THE BATTERIES

The meter uses four 1.5 V AA batteries. Remove the battery case cover on the lower edge of the meter housing. Change the batteries and push the battery case cover back into place.

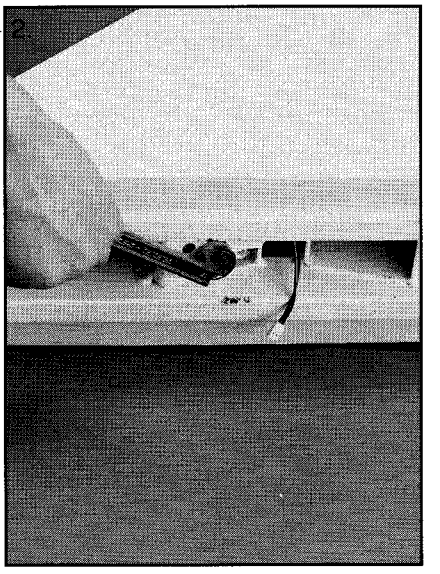
TECHNICAL DATA

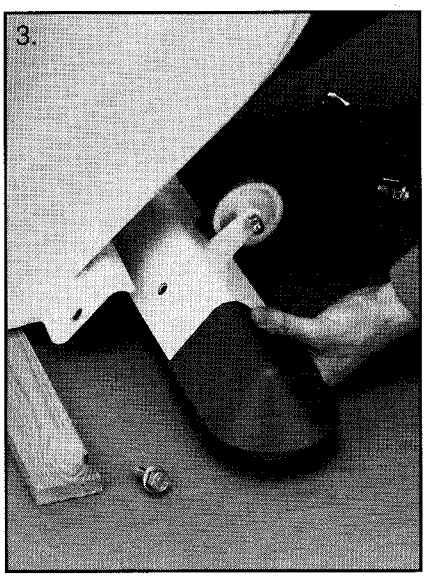
-length x width x height :
96 cm x 62 cm x 111 cm
-weight 50 kg
-flywheel 19 kg
-transmission ratio 1:3.5625
-seat height adjustment 60-100 cm
-handlebar rotates 360° on its axle
-welded, robust steel tube frame
-safe, enclosed structure
-magnetic brake
-large, multifunctional LCD display
-membrane pad keyboard with 10 keys
-pulse measurement by ear sensor (wireless, telemetric pulse measurement available as an accessory)

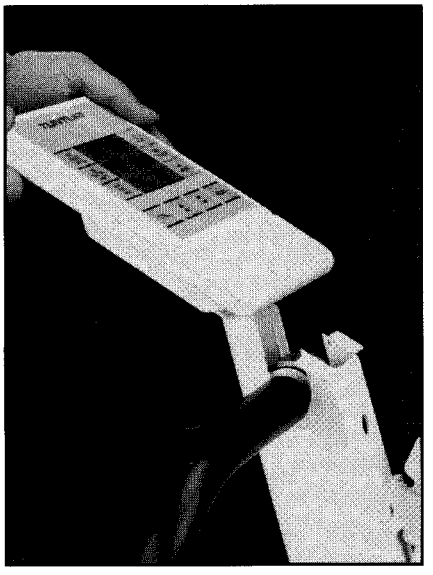


Ref. no	Part no.
1	233 1002 (incl. 2)
2	233 0010
3	203 1002
4	213 1001
5	513 501 86
6	533 235 86
7	62 0817 16 3
8	60 08 060 42
9	533 5005
10	373 1004
11	653 164 75
12	203 1001
13	503 1003
14	653 1005
15	403 1010
16	153 108 87
17	62 0612 16
18	61 0601
19	153 1001
20	533 5002
21	533 1004
22	653 0010
23	533 156 85
24	252 100 37
25	363 1002
26	363 1001
27	653 0002
28	353 5002
29	523 117 88
30	523 1001
31	60 10 025 03
32	103 1003
33	653 1003
34	533 1006
35	173 1008
36	60 05 020 21
37	173 1006 (R)
-	173 1007 (L)
38	60 42 016 59
39	653 133 84
40	433 1003
41	60 10 045 03
42	62 1022 25
43	533 209 89
44	503 1004
45	653 1006
46	62 1224 25
47	343 1002
48	533 536 84
49	523 504 84
50	523 1002
51	303 1004 (incl. 45-59)
54	673 1001
55	643 109 85
56	263 107 85
57	263 106 85
58	62 3850 10 1
59	673 1002
60	60 06 016 03
61	503 1001
62	373 1003
63	60 05 050 03
64	61 0501
65	61 0510
66	533 1010
67	673 600 86
68	343 1003
69	643 104 89
70	533 204 88
71	72 0608 180 1
72	72 0612 100 1
73	60 06 040 02
74	103 1004
75	533 1007
76	533 1011
77	343 500 88
78	673 500 88
79	553 103 89
80	423 1032 (incl. 81)

ASSEMBLY-MONTAGE-ASSEMBLAGE-MONTAGGIO-MONTERING-ASENNUS







MAINTENANCE-WARTUNG-
ENTRETIEN-MANUTENZIONE-
SERVICE-HUOLTO